

## **Abstract**

The invention relates to a procedure for testing the function of a lamp circuit, consisting of at least one lamp, by measuring the current and voltage.

Here, a resistance value is taken into account which is specified as a polynomial of at least the 1<sup>st</sup> order, preferably of the 3<sup>rd</sup> order, depending on the effective measured voltage on the lamp circuit, whereby the parameters of the polynomial are determined by a quantity of measurements which at least corresponds to the order of the polynomial, under operating conditions which are known to differ, and the specific resistance value or a value derived from it are compared with a specified value.

It is particularly advantageous that when the parameters are standardised to the nominal power by multiplying the parameters by the nominal power, uniform average values with acceptable deviations are found over wide ranges of lamps with a different nominal power. If the lamps also deviate from each other in terms of the nominal voltage which occurs under the nominal power, it has been shown to be particularly advantageous to standardise this resistance value to a shared nominal voltage, so that very different lamps can be described together with good approximation using uniform parameters, and corresponding function tests can be conducted to a higher degree of precision.

In particular, the failure of a lamp, or the installation of a lamp with an impermissible specification, can be detected on an output, even when several lamps are switched in parallel to each other.

*Legende zu den Figuren:*

Fig. 2/4:

U nenn        =        U nom

R nenn        =        R nom

Fig. 3/4:

Norm. spezifischer Warmwiderstand = Stand. specific heat resistance

Rspez        =        Rspec

Fig. 4/4:

Abweichung des normierten spezifischen Widerstandes = Deviation from the  
standardised specific resistance